

In the Claims

1/ 21. (Amended) A (co)polymer, comprising one or more free radically (co)polymerizable monomers, wherein the polymer exhibits a stereochemistry and microstructure, [(as defined by tacticity and sequence distribution,)] of a material formed by a free radical polymerization process, displays a [controlled] molecular weight distribution of less than 2.0, and possesses [specific identified] thermally stable [groups] residues of a polymerization initiator at each polymer end which will not thermally dissociate from the (co)polymer at temperatures below 150°C in the absence of a catalyst at predominantly each polymer chain end and a molecular weight in excess of two monomer units.

2/ 22. (Amended) The polymer of claim 21, wherein the [specific identified] thermally stable [groups] residues [at predominantly each polymer chain end] are functional groups.

3/ 23. (Amended) The polymer of claim 21, wherein the thermally stable [groups] residues can be modified to be used in subsequent chemical reactions.

6/ 26. (Amended) A [symmetrical] block copolymer, comprising:
at least two units obtained from one or more radically (co)polymerizable monomers,
wherein each unit is substantially similar; and [having]
a residue from an initiator in the copolymer [chain] and, at each chain end, a member selected from the group consisting of radically transferable atoms, radically transferable groups, groups obtained by conventional chemistry from said radically transferable atoms and groups obtained by conventional chemistry from said radically transferable groups.

7/ 27. (Amended) A [symmetrical] copolymer comprising:
units obtained from free radically (co)polymerizable monomers, wherein the [symmetrical] copolymer is formed by coupling two polymer chains, such that substantially each polymer chain has a residue of an initiator present on substantially each polymer chain end.

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CMT
G7

28. (Amended) A copolymer comprising units obtained from two or more free radically (co)polymerizable monomers, wherein the copolymer is a statistical, periodic or sequential copolymer and exhibits [controlled] molecular weight distribution of less than 2.0 and known functionality on predominantly each of the polymer chain ends.

C3 10 30

(Amended) A copolymer comprising units obtained from two or more radically (co)polymerizable monomers wherein the copolymer has a composition that [changes] varies [in a controlled manner] along the length of the polymer chain from terminus to terminus based on the relative reactivity ratios of the monomers and instantaneous concentrations of the monomers during polymerization.

C4 11 31

(Amended) The (co)polymer as claimed in claim 21, wherein said (co)polymer is selected from the group consisting of polystyrene, poly(methacrylate), poly(butylacrylate), poly(methylmethacrylate) and polyisoprene having a residue from a free radical initiator at [the head] one end of each polymer chain and a radically transferable group at the [tail] other end of each polymer chain end.

SH PH 12 32

(Amended) The block copolymer as claimed in claim 24, wherein said block copolymer is a poly([S]styrene-block-[M]methyl [A]acrylate) or a poly(methyl acrylate-block-styrene) (co)polymer having a residue of an initiator molecule at an initiation site at one polymer chain end, and a radically transferable atom or group at the other polymer chain end.

C5 13 33

(Amended) The [symmetrical] block copolymer as claimed in claim 26, wherein the [symmetrical] block copolymer is a poly([S]styrene-block-[Methyl] [A]acrylate-block-[S]styrene) copolymer having a radically transferable atom or group at each polymer chain end.

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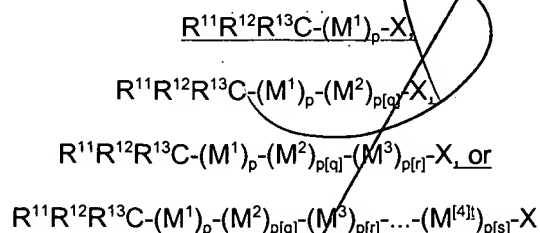
(Amended) The (co)polymer as claimed in claim 21, wherein said (co)polymer is [a member] selected from the group consisting of linear, monofunctional, star and telechelic polystyrenes, linear and star poly(methyl acrylate)s, poly(butyl acrylate)s, poly(methyl methacrylate)s, and

polyisoprenes, wherein the (co)polymer has either [an identifiable specific head group or] a residue of an initiator or a group obtained by conventional chemistry from the residue of the initiator at an initiation site, and a radically transferable atom or group at a polymer chain end, and wherein the (co)polymer displays a tacticity of a polymer prepared by free radical polymerization and has a [controlled] molecular weight distribution of less than 2.0.

35. (Amended) The (co)polymer claimed in claim 28, prepared by (co)polymerizing styrene and a monomer selected from [styrene and] methyl acrylate [or (co)polymerizing styrene] and methyl methacrylate to yield polymers in which the (co)polymer has a composition that changes in a predictable [, or calculable,] manner along the (co)polymer [from one end of the polymer chain to the other end of the polymer chain] based on the relative reactivity ratios of the monomers and a ratio of instantaneous concentrations of the monomers.

36. (Amended) The (co)polymer claimed in claim 30, prepared by (co)polymerizing styrene and a monomer selected from [styrene and] methyl acrylate [or (co)polymerizing styrene] and methyl methacrylate to yield polymers in which the (co)polymer has a composition that changes in a predictable [, or calculable,] manner along the (co)polymer [from one end of the polymer chain to the other end of the polymer chain] based on the relative reactivity ratios of the monomers and a ratio of instantaneous concentrations of the monomers.

37. (Amended) A (co)polymer, exhibiting a stereochemistry and microstructure, $[(I)]$ as defined by tacticity and sequence distribution $[(I)]$, of a polymer formed by a free radical polymerization process and displaying a [controlled] molecular weight distribution of less than 2.0 and calculable number average molecular weight, having the formula:



z is from 3 to 6 and,

the polymer exhibits a stereochemistry characteristic of a free radical polymerized material in conjunction with a [controlled] molecular weight distribution of less than 2.0.

39 56. (Amended) The (co)polymer of Claim 21, wherein the (co)polymer is a solvent-resistant ABA block copolymer comprising a[n oleophobic] monomer which contributes oleophobic properties to the (co)polymer.

40 57. (Amended) The (co)polymer of Claim 56, wherein the [oleophobic] monomer is selected from the group consisting of [a] (meth)acrylate and [an] (meth)acrylonitrile monomers.

41 58. (Amended) The (co)polymer of Claim 21, wherein the (co)polymer is a [solvent-resistant] ABA random copolymer comprising a[n oleophobic] monomer which contributes oleophobic properties to the (co)polymer.

59. (Amended) The (co)polymer of Claim 58, wherein the [oleophobic] monomer unit is selected from the group consisting of [a] (meth)acrylate and [an] (meth)acrylonitrile monomers.

Add new claims 62-64, as follows:

62. The copolymer of claim 21, wherein the polymer displays a molecular weight distribution of less than 1.5.

63. The copolymer of claim 28, wherein the polymer displays a molecular weight distribution of less than 1.5.--

REMARKS

In the subject application, claims 1 - 14 and 21 - 61 are pending. In the Office Action, Applicants' argument traversing restriction of the inventions was found to be unpersuasive and the restriction requirement was made final. Therefore, only claims 21 - 45 and 55 - 59 are under examination
PI - 543833.1